

The Hamgram

March 2024



BEN KUHN, KUØHN (LEFT), RUSS MARSOLEK, NØQK (RIGHT) AT THE MVARA SPRING FEVER SWAPMEET IN ONALASKA, WI

MVARA Spring Fever Swapfest

Myself (KFØACN) and Ben KUØHN were at the MVARA Swapfest in Onalaska this past March 2nd. Ben wanted to sell some of the items he had accumulated and we thought it'd be a good chance to sell club items I am in charge of selling on behalf of others as well as enjoy my first experience at a hamfest.

The goal of going back home with less than I came in with was achieved by both Ben and I and I am calling it a success.

Between the items I scored for my QRP rig and the J-pole antenna I won at the raffle I am very happy at my first experience!

Sam Resto, KFØACN

WARC Club Meeting

WHAT: Monthly Meeting
WHEN: March 21, 2024 at 7:00pm
WHERE: Room 016 in WSU
Cathedral School at 352 Center St,
Winona, MN

Zoom Information
Meeting ID: 688 182 0303
Password: WarcBoard

Reminder: New Meeting Location

The meeting venue has changed from the county building on 3rd St to the WSU Cathedral School at 352 Center St, Winona, MN 55987.

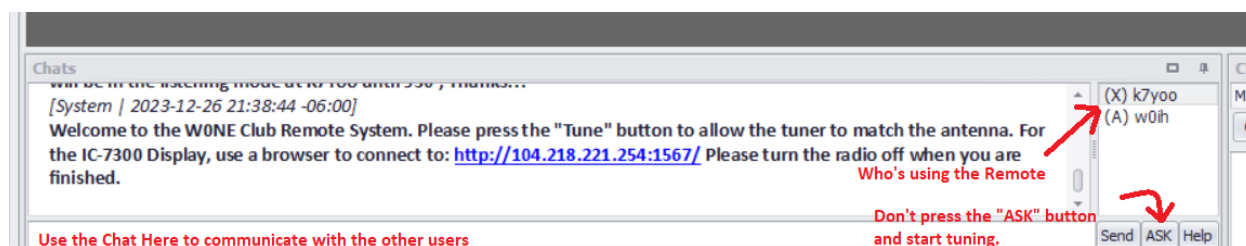
Park on the back, and when you enter the rear door take the elevator down to find Room 016. See you there!



Remote Rig Etiquette

Everyone that uses the IC-7300 HF rig at Witoka, needs to understand that we share the right with any of the club members that wish to use it.

If the radio is ON when you log in, please understand that there is someone using the rig. Don't start changing frequencies. If you look at the bottom for the user that is logged in. Understand that there are some that use the receiver at Witoka because the system is quiet, and they may use their own transmitter at home.

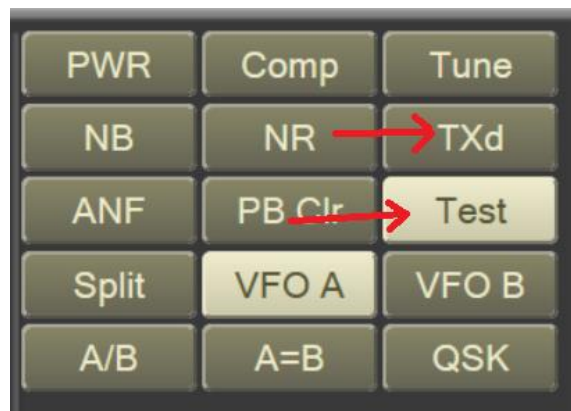


There are two ways to communicate with other users on the system, first (as noted above) use the "Chat" window to check the status of the other user.

Or you can use the "TEST" button to talk to the other user. Once the "TEST" button is highlighted, you or the other user can then press the "TXd" (Transmit button) and talk ONLY to the other user(s) logged into the system. The conversation is NOT transmitted over the air.

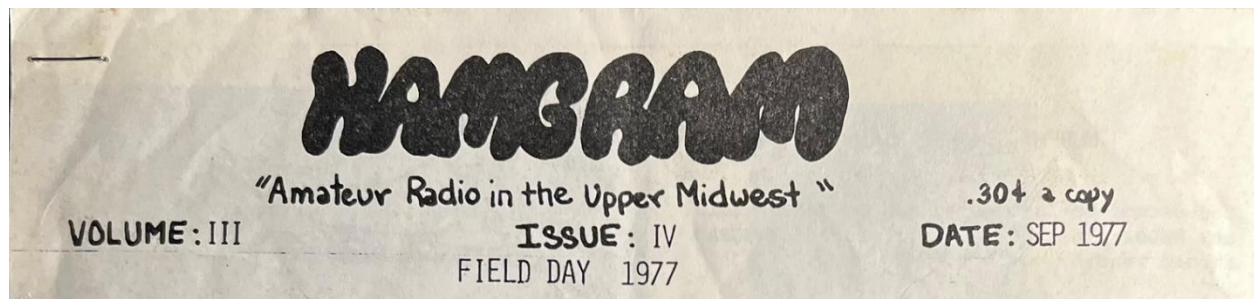
If you are done using the Remote, please turn off the Radio and Log Out to free the system up for other users.

Please be courteous and share the system.



Club History: Hamgram of September 1977

By Sam Resto, KFØACN



During sorting through a recent acquisition of items for storage and sale there were pictures, club documents, QSL cards, and I happened to come across a copy of the Hamgram from September 1977, edited by the late Erik Brom, WBØNIU, in good condition.

Hamgram, "Amateur Radio in the Upper Midwest" volume 3, issue 4. I like history and digging into the contents of this tote received from W9LSE include this issue, pictures, QSL cards, club documents, and other miscellaneous items related to the Winona Amateur Radio Club.

I wanted to share this piece of club history with others in the club. I will publish it to the

email reflector as well as posted on the w0ne.org website's news section.

I want to take this opportunity to incite others to enjoy this hobby and find projects or activities that are related to the hobby and pursue them.

If you would like to see other items from the club's history including documents, pictures, QSL cards, and other items we have please let me know!

Some of these items are scattered among club members and I would like to centralize and digitize as much as I can for posterity!

Project: HamClock

Do you have an old monitor and a Raspberry Pi (or are able to get these)? A interesting project I recently took on was the HamClock. There are many screens, but at its most basic it can display current time in UTC, solar activity, gray line, ISS information, path information for a QSO (if configured right) and DX cluster spots (if configured). There are many other things and options you can play with with HamClock.

One cool thing I did with it was to advertise the callsign I was looking at on my logging software and this would display the likely path to the other station on the screen.

If interested, I can bring my setup over for show and tell at a club meeting or do an in-depth article about it, including how I built it.

73, DE KFØACN



Recycled Power

By Ben Kuhn, KUØHN



Li-Ion and LiFePo4 batteries have many advantages in weight and power density over traditional lead-acid batteries. For example, I have assembled several 7S3P (21 cells total, with 3 series-wired banks of 7 cells in parallel) that fit in the same space as a typical 8AH SLAB battery but provide 25AH of energy storage. Lithium batteries can be used for emergency power in your shack, to upgrade an HT battery with a 3d-printed enclosure, as a rechargeable replacement for a memory battery in a TNC or radio, or as a power source for homebrew equipment like automatic antenna tuners.

There are three common methods used to build a pack from these cells. The easiest way is to purchase pre-built cell holders from your favorite electronics retailer. The cell holders can be wired together to achieve the configuration you want. Commercial packs are typically built by spot-welding nickel strips to the batteries in the desired configuration. This solution is also viable for homebrewers and makes for a very sturdy pack. There is an initial investment, but for someone who builds lots of packs it eventually pays off since cell holders are no longer needed.

When working with Lithium cells, especially Li-Ion cells, safety is a major concern. In the last 20 years expanding, heating, exploding, or burning lithium-ion batteries have made the news many times. LiFePo4 batteries are much safer when it comes to shorting or overheating, but accidents can still happen. When assembling a rechargeable lithium battery pack of any type, a battery management system (BMS) must be used. The BMS is a circuit that provides many safety functions for the battery. It prevents overcharging (a fire risk), undercharging (damages cells), and cell balancing (keeps each bank of parallel cells at the same voltage). BMSs will also cut off the load if a short is detected to prevent fires, and some have thermal monitoring as well. The BMS is by far the most important part of the battery so care must be taken to choose a quality BMS that is matched to the chemistry of the cells being used. The cost of a BMS varies based on the load it can handle and additional features it can provide. A basic Li-Ion BMS for a 30A load might cost \$10-\$15, while a BMS for a LiFePo4 pack that rated for 100A with bluetooth and UART (serial) health monitoring, and active cooling may cost \$100 or more.

There are many videos on YouTube with the technical specifics for homebrewing Lithium Batteries. If something in writing is more your style, OH8STN also has a blog detailing some homemade packs he built several years ago.

Full Article: https://news.w0ne.org/posts/2024-03-08_recycled-batteries/

WARC Executive Board (summary)

Wednesday, February 7, 2024, via Zoom

Present: Board Members: Lance Tagliapietra, ADØUT; Harro Hohenner, KG6RLM; Paul Schumacher, KØZYV; Sam Resto, KFØACN. Incipient Board Member: Justin McElmury, KFØBSI; Guests: Tom Wilmot, WØMK; Bob Seaquist, W9LSE.

Called to order at 7:01 p.m. by Lance Tagliapietra, ADØUT

There was discussing about the confusion of the Wednesday meeting as it was approved in November 2023 that board meetings would be held on the first Thursday of the month. Justin, KFØBSI, noted the minutes from November.

Minutes (Published news.w0ne.org): Sam Resto, KFØACN. *Approved.*

Treasurer: Harro Hohenner, KG6RLM. *Approved.*

Balance 1/1/2024 \$4,580.65
Income: \$120 (Dues)
Expenses: \$176 (PO Box 1415 rental), \$200 (Christmas Party Hall rental)
Balance reported by bank \$4,419.65
Paid members 7

Public Service: Dan Goltz, WKØW.

Attended the quarterly Winona County Emergency Coordinating meeting in January. The mass casualty exercise with Winona Health is yet to be scheduled. This summer an emergency exercise involving evacuation of a river tour boat is being planned. It is unknown if amateur radio will play a part.

Plans to move the amateur equipment at the LEC to the old dispatch center are on hold, pending the County Board's decision.

The LaCrosse Weather Service will not be holding a Skywarn training program in Winona County this year. Houston, LaCrosse, and Rochester are the closest sites.

Trustee: Mike Foerster, WØIH

Russ Marsolek, NØQK, noted that the 146.64 repeater on the KG Tower was triggering itself to

re-ID every 10 minutes. The problem is quite intermittent and sounds like it may have been due to cold weather, although unconfirmed. // The new install of the beam at the Witoka site seems to be holding up well.

Monthly Program: Change of Venue

Change of venue for this month's meeting. Melanie Reap, KDØNTN, has reserved room 016 at Cathedral School (352 Center St, Winona, MN 55987) for the club. Parking lot is to the south of the building. Once at location, enter via the back door near the parking lot on the south side. Take the stairs or elevator down.

Adjourn: 7:28 p.m.

Full Minutes at:

https://news.w0ne.org/minutes/2024-02-07_warc-executive-board-minutes/

Recharge the Club!

Winona Amateur Radio Club's low-cost, high-value dues are \$30 per calendar year per license holder, or \$35 per calendar year for all licensed members of the same family within the same household. Send dues to: Treasurer, P.O. Box 1451, Winona, MN 55987



Hamgram has a new editor

Back in the December 2023 issue, Bob Seaquist, W9LSE, announced that it was his last issue of the Hamgram and that this was his last term as the secretary for the Winona Amateur Radio Club.

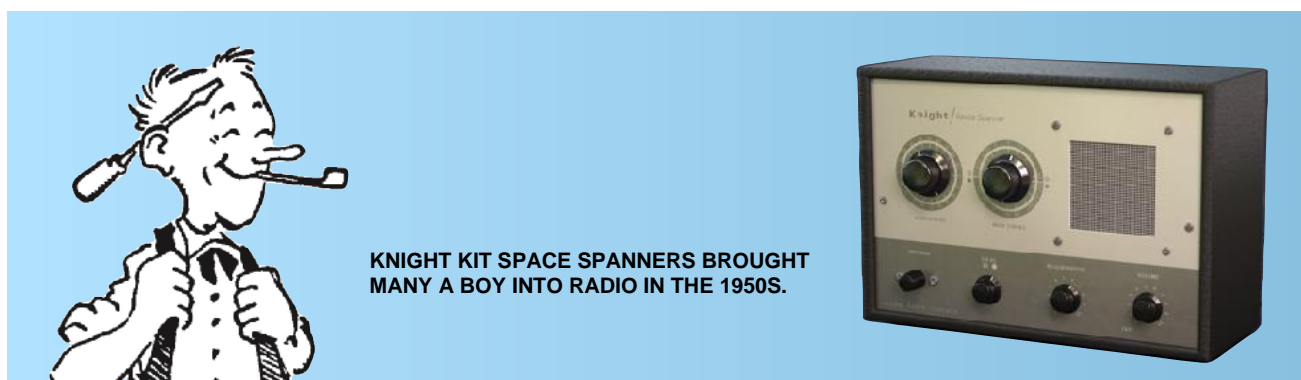
Bob has served as the club's secretary since 2016 and made improvements both to the layout of the hamgram, and making the minutes of the club in a standard format,

many reminders, and overall the keeper of the club's history through time.

Thank you Bob for your service and hard work!

There may be some time to adjust, but please bear with me as things fall into place.

73, from KFØACN



Winona Amateur Radio Club, Inc. PO Box 1451, Winona, MN 55987

WØNE Repeaters

146.640 PL 100.0 Hz *

146.835 PL 131.8 Hz ** FM Voice C4FM Digital

444.225 PL 100.0Hz FM Voice C4FM Digital

442.150 PL 100.0 Hz. FM Voice C4FM Digital

* SkyWarn Net when activated.

** Sunday Night Net—8:30 p.m.

Winona Amateur Radio club meetings are 7 p.m., third Thursday of the month at the WSU Cathedral School, 352 Center St, Winona, MN or Zoom video conferencing: <https://us06web.zoom.us/j/6881820303>
Meeting ID is 688 182 0303 and the password is WarcBoard

The monthly program is open to the public.

President: Lance Tagliapietra, ADØUT, lancetag@hbc.com
Vice President: Paul Schumacher, KØZYV, pschumacher@winona.edu
Treasurer: Harro Hohenner, KG6RLM, harro@hohenner.com
Secretary: Elisamuel Resto, KFØACN, sam@samresto.dev
Custodian: Mike Foerster, WØIH, mchlfrstr@gmail.com
At Large: Marv Rodvold, AC9TO; Justin McElmury, KFØBSI



The Hamgram is published monthly by The Winona Amateur Radio Club, Inc. Distribution is via e-mail and the WØNE.org Web site. Editor: Sam Resto, KFØACN. Address correspondence to: Sam Resto, 1535 W 5TH ST APT 102, Winona, MN 55987 or email at sam@samresto.dev. Monthly club programs are held on the third Thursday. The submission deadline for the Hamgram is Wednesday of the week prior to that of the club programs.